

Application No.: 09/677,752  
Amendment Dated: February 27, 2006  
Reply to Office Action of: August 30, 2005

Attorney Docket No.: 71515, 087.999  
Customer No.: 35161

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-93. (cancelled)

94. (previously presented) A vaccine comprising an isolated recombinant PMPE polypeptide comprising a polypeptide encoded by a nucleic acid molecule comprising the nucleotide sequence of SEQ ID No.: 1 fused to a nucleic acid molecule encoding a histidine affinity ((H)<sub>6</sub>) domain.

95. (previously presented) A vaccine comprising an isolated recombinant PMPE polypeptide comprising the amino sequence of SEQ ID No.: 2 fused to an amino acid sequence comprising a histidine affinity ((H)<sub>6</sub>) domain.

96-98. (cancelled)

99. (previously presented) The vaccine of claim 94 or 95, further comprising one or more adjuvants or immunostimulatory compounds.

100. (previously presented) The vaccine of claim 94 or 95, wherein the one or more adjuvants or immunostimulatory compounds are selected from the group consisting of alum, MLT, QS21, MF59, CpG DNA, PML, calcium phosphate and PLG.

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101. (previously presented) The vaccine of claim 94 or 95, comprising one adjuvant or immunostimulatory compound.
102. (previously presented) The vaccine of claim 94 or 95, comprising two different adjuvants or immunostimulatory compounds.
103. (previously presented) The vaccine of claim 94 or 95, additionally comprising one or more immunogens selected from the group consisting of a lipid, lipoprotein, phospholipid, lipooligosaccharide, protein, attenuated organism and inactivated whole cell.
104. (cancelled)
105. (previously presented) The vaccine of claim 103, wherein the additional immunogen is another protein of *Chlamydia*.
106. (previously presented) The vaccine of claim 103, wherein the additional immunogen is HMW (High Molecular Weight) protein of *Chlamydia trachomatis*.
107. (previously presented) A vaccine comprising an isolated putative membrane protein E (PMPE) polypeptide of a *Chlamydia spp.* comprising an amino acid sequence of SEQ ID No.: 2.
108. (currently amended) A vaccine comprising an isolated putative membrane protein E (PMPE) polypeptide of a *Chlamydia spp.* comprising an amino acid sequence of SEQ ID NO.s

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~~5-22. at least 90% identical to SEQ ID No.: 2 when % identity is determined using XBLAST program, score=50, wordlength=3.~~

109. (cancelled)

110. (cancelled)

111. (previously presented) A vaccine comprising an isolated putative membrane protein E (PMPE) polypeptide of a *Chlamydia* spp. produced by a method comprising culturing a host cell containing a nucleic acid molecule comprising the sequence of SEQ ID No.: 1 and recovering said recombinant polypeptide from said host cell.

112. (previously presented) A vaccine comprising an isolated putative membrane protein E (PMPE) polypeptide of a *Chlamydia* spp., said polypeptide produced by a method comprising culturing a host cell containing a nucleic acid molecule which encodes an amino acid sequence of SEQ ID No.: 2 and recovering said recombinant polypeptide from said host cell.

113. (cancelled)

114. (cancelled)

115. (previously presented) A vaccine comprising an isolated putative membrane protein E (PMPE) polypeptide of a *Chlamydia* spp., said polypeptide produced by a method comprising culturing a host cell containing a nucleic acid molecule comprising the sequence of SEQ ID No.:

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I fused to a histidine affinity ((H)<sub>6</sub>) domain and recovering said recombinant polypeptide from said host cell.

116. (previously presented) A vaccine comprising an isolated putative membrane protein E (PMPE) polypeptide of a *Chlamydia* spp., said polypeptide produced by a method comprising culturing a host cell containing plasmid M15 pREP (pQE-pmpE Ct)#37 obtainable from *E. coli* having ATCC accession No. PTA-2462 and recovering said recombinant polypeptide from said host cell.

117. (cancelled)

118. (currently amended) The vaccine of any one of claims ~~407-417~~ 107, 108, 111, 112, 115, and 116 wherein the *Chlamydia* spp. is *Chlamydia trachomatis*, *Chlamydia pneumonia*, *Chlamydia psittaci* or *Chlamydia pecorum*.

119. (currently amended) The vaccine of any one of claims ~~407-417~~ 107, 108, 111, 112, 115, and 116 wherein the *Chlamydia* spp. is *Chlamydia trachomatis*.

120. (currently amended) The vaccine of any one of claims ~~407-417~~ 7107, 108, 111, 112, 115, and 116 further comprising one or more adjuvants or immunostimulatory compounds.

121. (previously presented) The vaccine of claim 120 wherein the adjuvants or immunostimulatory compounds are one or more of alum, MLT, QS21, MF59, CpG DNA, PML, calcium phosphate and PLG.

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122. (previously presented) The vaccine of claim 120 comprising one adjuvant or immunostimulatory compound.

123. (previously presented) The vaccine of claim 120 comprising two different adjuvants or immunostimulatory compounds.

124. (previously presented) The vaccine of claim 120 additionally comprising one or more immunogens selected from the group consisting of a lipid, lipoprotein, phospholipid, lipooligosaccharide, protein, attenuated organism and inactivated whole cell.

125. (cancelled)

126. (previously presented) The vaccine of claim 124 wherein the additional immunogen is another protein of *Chlamydia*.

127. (previously presented) The vaccine of claim 124 wherein the additional immunogen is HMW (High Molecular Weight) protein of *Chlamydia trachomatis*.

128. (cancelled)

129. (cancelled)

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130. (new) The vaccine of any of claims 107, 108, 111, 112, and 116 wherein said PMP E polypeptide is a chimeric polypeptide comprising one or more heterolous polypeptides, lipids, phospholipids, or lipopolysaccharides fused to the amino terminus or carboxyl terminus.